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| EXAMINER |
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LANIER, BENJAMIN E

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| ART UNIT | PAPER NUMBER |
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2132

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01/24/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|---------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 09/965,831 | Applicant(s) TAM ET AL. | |
| | Examiner Benjamin E. Lanier | Art Unit 2132 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on 27 September 2007, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below. The new ground of rejection resulted from confusion with respect to particular claim elements that arose as a result of numerous claim amendments, which resulted in the misapplication of the Rai reference. The correct application of the Rai reference is set forth below.

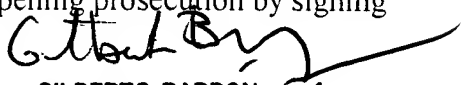
To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Response to Arguments


GILBERTO BARRON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

2. Applicant's argument that the metadata and content data are not both watermarked has been fully considered and is persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Katayama, U.S. Publication No. 2002/0027994.

Claim Objections

3. Claim 26 is objected to because of the following informalities:

Change “advertisement audio” to “trial listening” on line 6 of claim 26.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 18, 19, 21, 26, 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Katayama, U.S. Publication No. 2002/0027994. Referring to claim 18, Katayama discloses an audio distribution system wherein an audio signal separated by a band separation filter into a plurality of frequency bands ([0078] & Figure 4b). The high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of a watermarked audio signal stored in a memory or a computer readable medium comprising at least two sections each having audio content, including a first section which is distorted in a manner recoverable by means of a key obtainable from audio content in at least one other section.

Referring to claim 19, Katayama discloses that the high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal

[[0081] & [0082] & [0086]], which meets the limitation of said first section is a section to which access is restricted.

Referring to claim 21, Katayama discloses that the low quality section allows users to sample audio content ([0089]), which meets the limitation of said at least one other section comprises a trial listening section.

Referring to claim 26, Katayama discloses an audio distribution system wherein an audio signal separated by a band separation filter into a plurality of frequency bands ([0078] & Figure 4b), which meets the limitation of sectioning said signal into a first section. The high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of generating distortion of said first section in manner recoverable by a key obtainable from said trial listening section. The low quality section allows users to sample audio content ([0089]), which meets the limitation of sectioning a trial listening section. The entire segmented signal is distributed such only the low quality section can be played back without having purchased rights to the high quality section ([0089]-[0090] & Figure 4b), which meets the limitation of appending said distorted section to said trial listening section, wherein the key is obtainable from said advertisement audio content in said section.

Referring to claim 28, Katayama discloses an audio distribution system wherein an audio signal separated by a band separation filter into a plurality of frequency bands ([0078] & Figure 4b), which meets the limitation of sectioning said signal into at least two sections having media content. Each section is marked (Figure 4b), which meets the limitation of marking at least one of the said sections whereby said sections may be identified. The high frequency section is

encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of generating distortion in one of said sections of said signal in a manner recoverable by a key obtainable from at least one other section having media content, wherein said key is, obtainable from said media content in said one or more other sections. The entire segmented signal is distributed such only the low quality section can be played back without having purchased rights to the high quality section ([0089]-[0090] & Figure 4b), which meets the limitation of appending said distorted section to said one or more other sections to form a composite signal comprising a distorted section and at least one undistorted section.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1, 5, 8, 9-13, 15-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downs, U.S. Patent No. 6,226,618, in view of Katayama, U.S. Publication No.

2002/0027994. Referring to claims 1, 18, 23, 28, Downs discloses an electronic content delivery system wherein an uncompressed audio file is watermarked with identification data (Col. 18, steps 121-125), which meets the limitation of incorporating watermarking information into said audio signal to form a watermarked audio signal. The watermarked content is encrypted using a symmetric key that is packed along with the content (Col. 18, steps 125-127), which meets the limitation of generating distortion of said signal in a manner recoverable by a key. Downs does not disclose that the watermarked content is sectioned into at least two sections each having audio content, a key obtainable from at least one other section having audio content, and appending said distorted section to said at least one other section to form a composite signal comprising a distorted section and at least one undistorted section. Katayama discloses an audio distribution system wherein an audio signal separated by a band separation filter into a plurality of frequency bands ([0078] & Figure 4b), which meets the limitation of section said audio signal into at least two sections each section having audio content. Each section is marked (Figure 4b), which meets the limitation of marking at least one of the said sections whereby said sections may be identified. The high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of generating distortion in a first one of said sections of said signal in a manner recoverable by a key obtainable from at least one other section having audio content. The entire segmented signal is distributed such only the low quality section can be played back without having purchased rights to the high quality section ([0089]-[0090] & Figure 4b), which meets the limitation of appending said distorted section to said at least one other section to form a composite signal comprising a distorted section and at least one undistorted section. It would

have been obvious to one of ordinary skill in the art at the time the invention was made to segment the watermarked audio of Downs into high and low frequency sections and encrypt only the high frequency section in a manner decryptable with a key embedded in the basic section of the audio signal, in order to provide users a chance to sample the audio content before deciding whether to purchase the audio content while providing content providers a means to prevent illegal use and illegal copying of high sound quality audio contents as taught by Katayama ([0009] & [0089]).

Referring to claims 5, 8, 9, 19, Katayama discloses that the high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of said key is obtainable directly from a sequence of bits contained in said audio content of at least one other section, a bitstream of said first section is subject to a scrambling function to create said distortion, said first section comprises a section to which access is to be restricted. It would have been obvious to one of ordinary skill in the art at the time the invention was made to segment the watermarked audio of Downs into high and low frequency sections and encrypt only the high frequency section in a manner decryptable with a key embedded in the basic section of the audio signal, in order to provide users a chance to sample the audio content before deciding whether to purchase the audio content while providing content providers a means to prevent illegal use and illegal copying of high sound quality audio contents as taught by Katayama ([0009] & [0089]).

Referring to claims 10-12, 20-22, Downs discloses the content can contain a store advertisement object (Col. 85, line 50). Downs does not disclose that the watermarked content is sectioned into at least two sections each having audio content. Katayama discloses an audio

distribution system wherein an audio signal separated by a band separation filter into a plurality of frequency bands ([0078] & Figure 4b). The low quality section allows users to sample audio content ([0089]), which meets the limitation of said at least one other section comprises a trial listening section and an advertisement section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to segment the watermarked audio of Downs into high and low frequency sections and encrypt only the high frequency section in a manner decryptable with a key embedded in the basic section of the audio signal, in order to provide users a chance to sample the audio content before deciding whether to purchase the audio content while providing content providers a means to prevent illegal use and illegal copying of high sound quality audio contents as taught by Katayama ([0009] & [0089]).

Referring to claim 13, Downs discloses that the watermarked audio signal is compressed (Col. 18, step 125).

Referring to claim 15, Katayama discloses that the format of the segmented audio is MP3 ([0046]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to segment the watermarked audio of Downs into high and low frequency sections and encrypt only the high frequency section in a manner decryptable with a key embedded in the basic section of the audio signal, in order to provide users a chance to sample the audio content before deciding whether to purchase the audio content while providing content providers a means to prevent illegal use and illegal copying of high sound quality audio contents as taught by Katayama ([0009] & [0089]).

Referring to claims 16, 24, Katayama discloses that the decryption key is extracted from the basic section of the signal and used to decrypt the high quality section of the signal for

playback ([0085]-[0086]), which meets the limitation of reading said composite signal, identifying said sections, obtaining said key from said at least one undistorted section, and recovering said distorted section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to segment the watermarked audio of Downs into high and low frequency sections and encrypt only the high frequency section in a manner decryptable with a key embedded in the basic section of the audio signal, in order to provide users a chance to sample the audio content before deciding whether to purchase the audio content while providing content providers a means to prevent illegal use and illegal copying of high sound quality audio contents as taught by Katayama ([0009] & [0089]).

Referring to claim 17, Downs discloses that decryption is performed in real-time (Col. 82, line 52).

Referring to claims 25-27, Downs discloses an electronic content delivery system wherein an uncompressed audio file is watermarked with identification data (Col. 18, steps 121-125). The watermarked content is encrypted using a symmetric key that is packed along with the content (Col. 18, steps 125-127), which meets the limitation of generating distortion of said signal in a manner recoverable by a key. The content can contain a store advertisement object (Col. 85, line 50), which meets the limitation of creating an audio signal having audio content and an advertisement section. Downs does not disclose that the watermarked content is sectioned into at least two sections each having audio content, a key obtainable from at least one other section having audio content, and appending said distorted section to said at least one other section to form a composite signal comprising a distorted section and at least one undistorted section. Katayama discloses an audio distribution system wherein an audio signal separated by a

band separation filter into a plurality of frequency bands ([0078] & Figure 4b), which meets the limitation of section said audio signal into at least two sections each section having audio content. The high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of generating distortion in a first one of said sections of said signal in a manner recoverable by a key obtainable from at least one other section having audio content. The low quality section allows users to sample audio content ([0089]), which meets the limitation of said at least one other section comprises a trial listening section and an advertisement section. The entire segmented signal is distributed such only the low quality section can be played back without having purchased rights to the high quality section ([0089]-[0090] & Figure 4b), which meets the limitation of appending said distorted section to said at least one other section to form a composite signal comprising a distorted section and at least one undistorted section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to segment the watermarked audio of Downs into high and low frequency sections and encrypt only the high frequency section in a manner decryptable with a key embedded in the basic section of the audio signal, in order to provide users a chance to sample the audio content before deciding whether to purchase the audio content while providing content providers a means to prevent illegal use and illegal copying of high sound quality audio contents as taught by Katayama ([0009] & [0089]).

9. Claims 6, 7, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downs, U.S. Patent No. 6,226,618, in view of Katayama, U.S. Publication No. 2002/0027994, further in view of Schneier. Referring to claims 6, 7, Downs discloses that the content is encrypted using a

symmetric key that is packed along with the content (Col. 18, steps 125-127), but does not disclose encrypting using a hash output. Schneier discloses a method of symmetric encryption that hashes the file to be encrypted and then encrypts the file using the hash output (Pages 351-353). It would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the audio files of Downs using the output of the audio file hashes because that encryption process performs faster than other symmetric encryption algorithms as taught in Schneier (Page 355).

Referring to claim 14, Downs discloses that the watermarked audio signal is compressed (Col. 18, step 125).

10. Claims 3, 4, 29, 30, 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downs, U.S. Patent No. 6,226,618, in view of Katayama, U.S. Publication No. 2002/0027994, further in view of Tian, U.S. Patent No. 6,714,683. Referring to claims 29, 30, 33-36, Downs discloses an electronic content delivery system wherein an uncompressed audio file is watermarked with identification data (Col. 18, steps 121-125), which meets the limitation of incorporating watermarking information into said media content signal, said media content signal is an audio signal. The watermark can survive several steps of content processing (Col. 22, lines 4-8), which meets the limitation of a robust watermarking technique to form a watermarked media content signal. The content is encrypted using a symmetric key that is packed along with the content (Col. 18, steps 125-127), which meets the limitation of generating distortion in at least a part of said watermarked media content signal in a manner recoverable by a key. Downs does not disclose embedding said key in at least a part of said watermarked media content signal using a fragile data hiding technique, whereby if said watermarking information is corrupted,

altered or removed said embedded key is rendered unobtainable from said media content signal.

Katayama discloses an audio distribution system wherein an audio signal separated by a band separation filter into a plurality of frequency bands ([0078] & Figure 4b). The high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of embedding said key in at least a part of said watermarked media content signal, a media content layer having one or more sections comprising media content, said section or at least of said sections if there is more than one section, being distorted in a manner recoverable by use of said key, said key is embedded in said audio content of said at least one other section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to segment the watermarked audio of Downs into high and low frequency sections and encrypt only the high frequency section in a manner decryptable with a key embedded in the basic section of the audio signal, in order to provide users a chance to sample the audio content before deciding whether to purchase the audio content while providing content providers a means to prevent illegal use and illegal copying of high sound quality audio contents as taught by Katayama ([0009] & [0089]).

Katayama does not disclose that the key is embedded using a fragile data hiding technique. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to embed the key in Katayama using a fragile data hiding technique in order to detect transformations performed on the data as taught by Tian (Col. 5, lines 7-11).

Referring to claim 3, Downs discloses that the symmetric key is randomly generated (Col. 15, lines 63-65), which meets the limitation of said distortion is generated by creating a pseudo-random number sequence for adding as pseudo-random noise to said first said section,

and wherein said pseudo-random number sequence is embedded in said at least one other section to enable said random noise to be subsequently removed.

Referring to claim 4, encryption is a form of scrambling.

11. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downs, U.S. Patent No. 6,226,618, in view of Katayama, U.S. Publication No. 2002/0027994, further in view of Tian, U.S. Patent No. 6,714,683 as applied to claim 29 above, and further in view of Rhoads, U.S. Patent No. 5,636,292. Referring to claims 31-32, Downs discloses an electronic content delivery system wherein an uncompressed audio file is watermarked with identification data (Col. 18, steps 121-125), which meets the limitation of said media content signal is an audio signal. Katayama discloses an audio distribution system wherein an audio signal separated by a band separation filter into a plurality of frequency bands ([0078] & Figure 4b). The high frequency section is encrypted in a manner that is decryptable with a key that is embedded in the basic section of the signal ([0081] & [0082] & [0086]), which meets the limitation of watermarking information is embedded across said at least two sections. Katayama does not disclose embedding the key across at least two sections. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to embed the key of Katayama in the low quality section in addition to the basic section in order to make the key retrieval from multiple sections of content as taught by Rhoads (Col. 2, lines 1-9).

Conclusion


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E. Lanier whose telephone number is 571-272-3805. The examiner can normally be reached on M-Th 6:00am-4:30pm.

Application/Control Number:
09/965,831
Art Unit: 2132

Page 14

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Benjamin E. Lanier
Primary Examiner